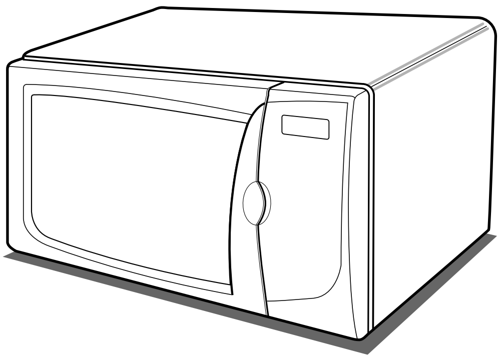
MICROWAVE/GRILL OVEN

SERVICE MANUAL

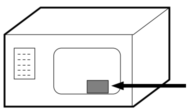
MODEL: MH-704A

CAUTION

BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



SPECIFICATIONS

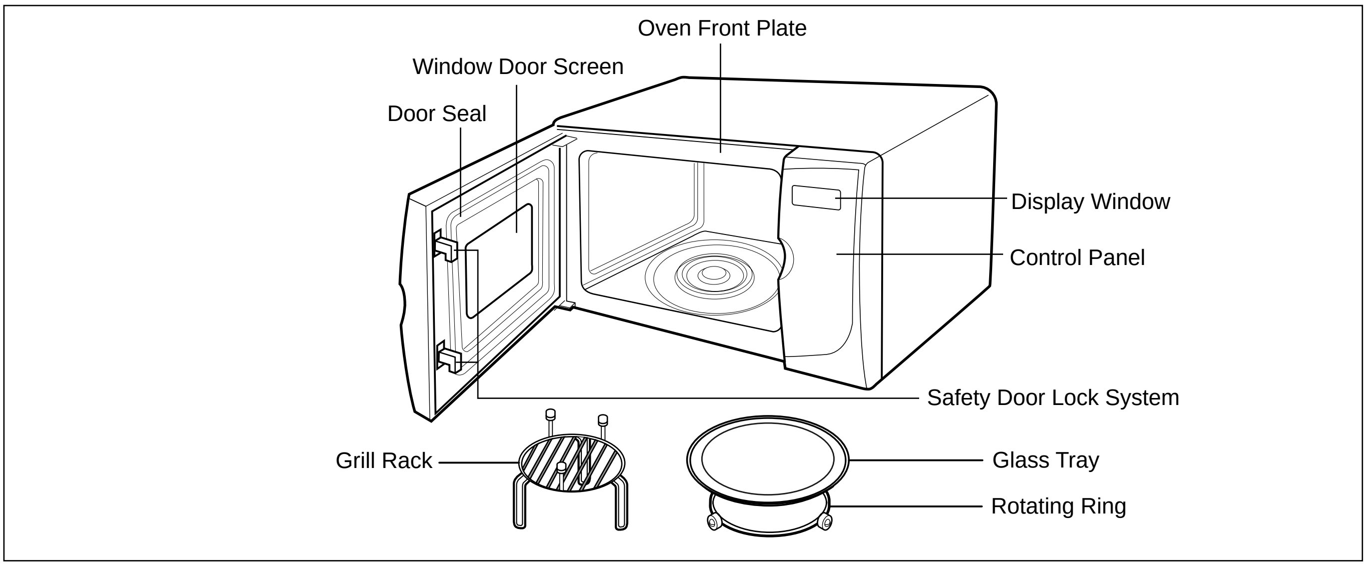
ITEM	DESCRIPTION
MODEL	**MH-704A**
Power Requirement	220 Volts AC 50 Hz Single phase, 3 wire grounded Microwave 1,300W Grill 1,150W Combination 2,400W
Power Output	900 Watts full microwave power (IEC705)
Microwave Frequency	2,450 MHz
Magnetron	2M214 - 39F
Timer	99 min. 50 sec.
Outside Dimensions	530 (W) x 322 (H) x 404 (D) mm
Cavity Dimensions	348 (W) x 232 (H) x 373 (D) mm
Net Weight	18 kg (approx.)
Shipping weight	20 kg (approx.)
Control Complement	Microwave Power for Variable Cooking Power level MAX-- Full power throughout the cooking time MED.-HIGH ---------------------------------- approx. 80% of Full power MEDIUM -------------------------------------- approx. 60% of Full power DEFROST------------------------------------ approx. 40% of Full power LOW/WARM --------------------------------- approx. 20% of Full power Grill, COMBI
Nameplate Location	
Accessories	Owner's manual Glass tray Rotating ring Grill rack

This microwave oven is designed for household use only.

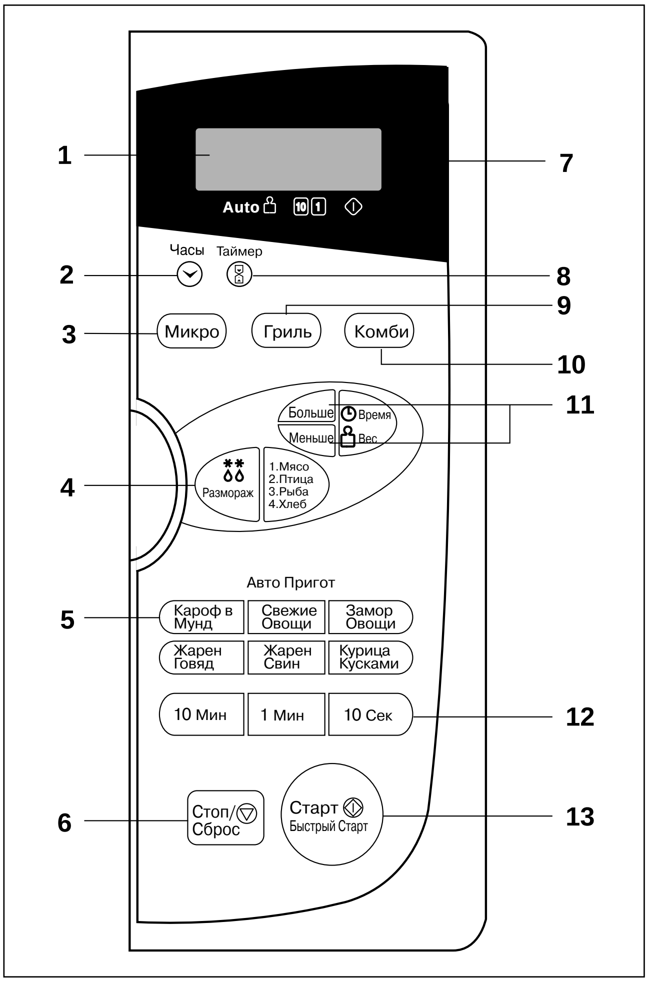
It is not recommended for commercial purposes.

OPERATING INSTRUCTIONS

FEATURES



CONTROL PANEL



1. INDICATORS
2. SET CLOCK: Used to set the time of day.
3. POWER: Used to select the desired power level for cooking.
4. AUTO DEFROST: Used to select the auto weight defrost.
5. AUTO COOK: Used to cook the foods listed by one touch.
6. STOP/CLEAR: Used to stop oven and clear all entries except time of day.
   - CHILD LOCK
7. DISPLAY WINDOW
8. KITCHEN TIMER
9. GRILL: Used to select the grill cooking.
10. COMBI: Used to select the combination cooking.
11. MORE/LESS: Used to change cooking time.
    WEIGHT: Used to select the desired weight.
12. COOK TIME: Used to cook food for a desired time.
13. START: One tap allows oven to begin functioning.

OPERATING SEQUENCE

The following is a description of component functions during oven operation.

1. SETTING THE CLOCK

Stop → Set clock → Set the correct time → Set clock

NOTE: You can set 12 hour clock or 24 hour clock optionally.

2. CANCEL FUNCTION

Touch the STOP pad whenever you need to cancel an entry or a function currently in use.
The display will either return to the last item entered or to the clock.

3. QUICK START

Stop → Start

4. MICROWAVE COOKING

Stop → Desired power level → Desired cooking time → Start

5. MULTI-STAGE MICROWAVE COOKING

STAGE 1

Stop → [Desired power level → Desired cooking time] →

STAGE 2

→ [Desired power level → Desired cooking time] → Start

OR

→ [Grill or Combi → Desired cooking time] → Start

6. GRILL COOKING

Stop → Grill → Desired cooking time → Start

7. COMBINATION COOKING

Stop → Desired combi category → Desired cooking time → Start

8. AUTO WEIGHT DEFROST

Stop → Desired defrost category → Desired cooking weight → Start

9. CHILD LOCK

This oven has a CHILD LOCK feature

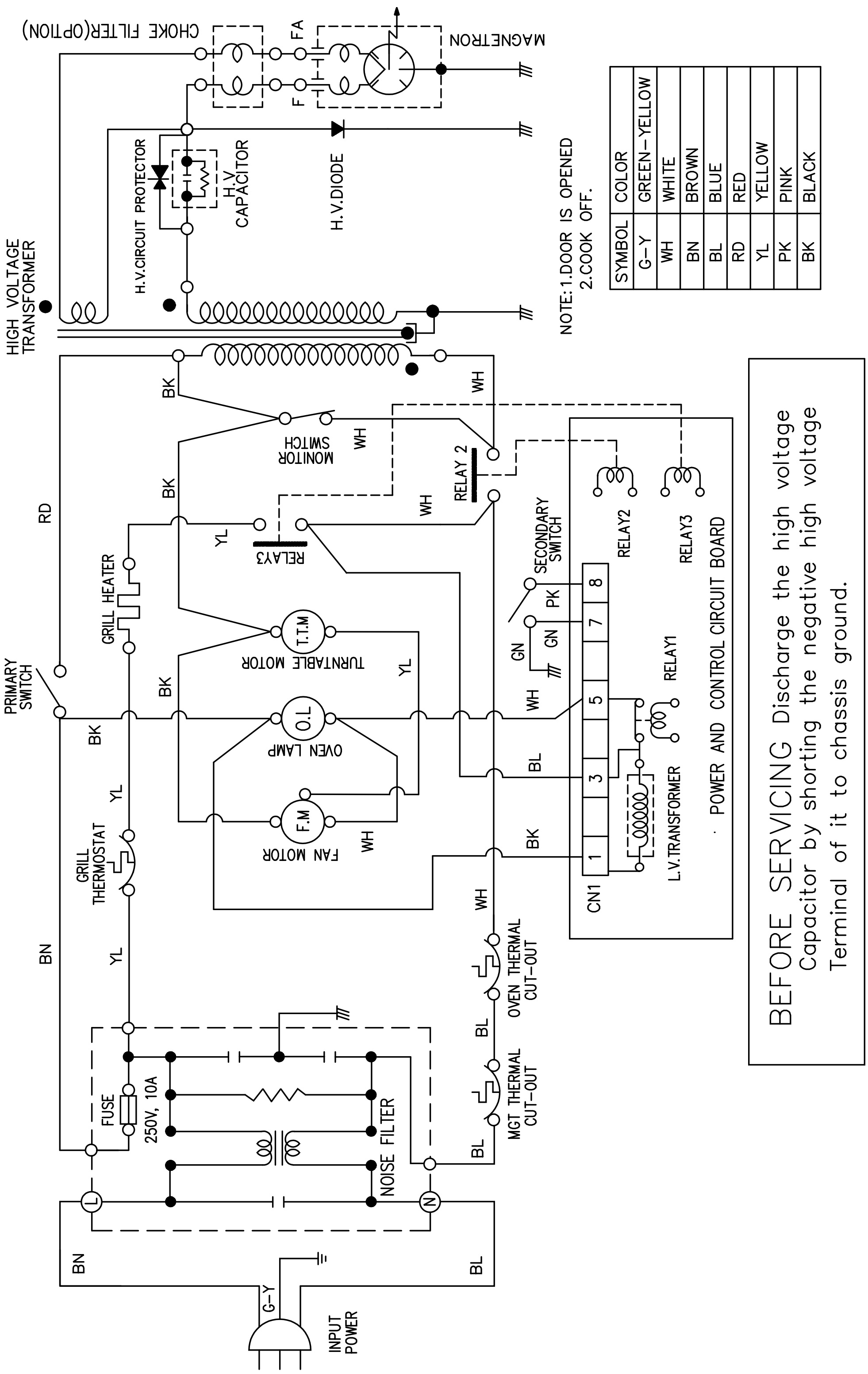
- TO SET CHILD LOCK
  - Touch the Stop pad
  - Touch STOP pad → **L** appear in the display.

- TO CANCEL CHILD LOCK
  - Touch the Stop pad
  - touch STOP pad → **L** disappears.

10. AUTO COOK

Stop → Desired auto cook category → Desired cooking weight → Start

SCHEMATIC DIAGRAM



CIRCUIT DESCRIPTION

GENERAL DETAILS

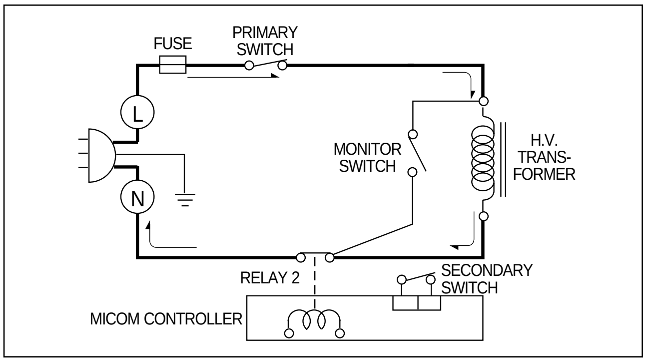
- The low voltage transformer supplies the necessary voltage to the micom controller when power cord is plugged in.
- When the door is closed, the primary switch is ON, the secondary switch is ON, and the monitor switch opens (contact COM and NO).

WHEN SELECTING COOKING POWER LEVEL AND TIME

- The micom controller memorizes the function you set.
- The time you set appears in the display window.
- Each indicator light turns on to indicate that the stage has been set.

WHEN TOUCHING THE START PAD

- The coil of the relay is energized by the micom controller.
- Power input is supplied to the high voltage transformer through the fuse to the primary switch and relay 2.
- Turntable rotates.



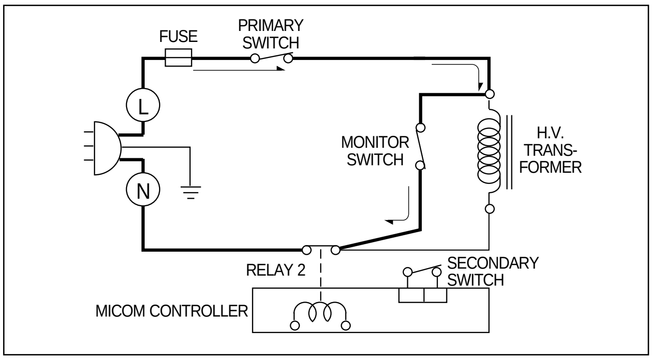
- The fan motor rotates and cools the magnetron by blowing the air (coming from the intake on the baseplate).
- The air is also directed into the oven to exhaust the vapor in the oven through the upper plate.
- Cooking time starts counting down.
- 3.2 volts AC is generated from the filament winding of the high voltage transformer. This 3.2 volts is applied to the magnetron to heat the magnetron filament through two noise-preventing choke coils.
- A high voltage of approximately 2100 volts AC is generated in the secondary of the high voltage transformer which is increased by the action of the high voltage diode and charging of the high voltage capacitor.
- The negative 4,000 Volts DC is applied to the filament of the magnetron.

WHEN THE OVEN IS SET AT ANY LEVEL EXCEPT MAXIMUM.

- The micom controller controls the ON-OFF time of relay 2 by the applied signal to vary the average output power of microwave oven as POWER LEVEL. (refer to page 1-1)
- One complete cycle of relay 2 is 22 seconds.

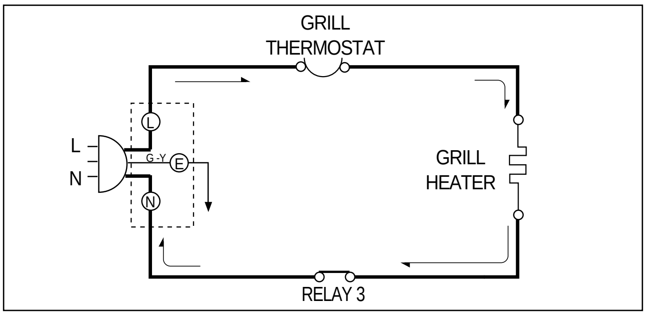
WHEN THE DOOR IS OPENED DURING COOKING

- Both the primary switch and relay 2 are cut off primary winding voltage of the high voltage transformer.
- ON-OFF of relay 2 is coupled electrically with opening and closing of the secondary switch.
- When the door is opened, the secondary switch is opened and when the door is closed, the secondary switch is closed.
- The cooking time stops counting down.
- Relay stops functioning.
- As the door is opened, if the contact of primary switch and relay 2 and/or secondary switch fails to open, the fuse opens due to the large current surge caused by the monitor switch activation, which in turn stops magnetron oscillation.



WHEN TOUCHING THE START KEY WITH THE GRILL COOKING FUNCTION SELECTED

- The contacts of the primary switch and the secondary switch close the circuit.
- A.C. voltage is applied to the grill heater through grill thermostat as shown by the solid line.



- Turntable rotates.
- The fan motor rotates.
- The air is also directed into the oven to exhaust the vapor in the oven through the base plate and upper plate.